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ABSTRACT

This paper briefly reviews studies of infant-peer and infant-mother interaction, and describes a study which compares the effects of mothers and peers on toddler play. Twenty-six toddlers (13 males and 13 females) aged 21 to 24 months were observed in two social situations each: playing with his/her mother, and playing with a familiar peer (after exit of the mother). Infant interactions with play objects in each of the two social situations were coded for the level of exploratory behavior and the degree of involvement of the child. In addition, observations were coded for each child under all of the four experimental conditions: mother and infant, infant alone, infant, mother and peer; and infant and peer alone. Results indicated significant sex differences: males exhibited a greater frequency of play activity with peers while females most frequently played with their mothers. Also, males showed a greater frequency of high level play (exploratory and creative combined) with peers, while females again indicated a greater level of high frequency play with their mothers. Hence, both mothers and peers are the best facilitators of high level and sustained play, depending on the gender of the child. (CM)

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THE ROLE OF GENDER IN DETERMINING THE INFLUENCE OF MOTHERS AND PEERS ON TODDLER PLAY

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Introduction:

Within the last several years there has been an upsurge of interest in infant-peer interaction (Mueller & Lucas, 1975; Mueller & Brenner, 1977; Rubenstein & Howes, 1976; Eckerman, Whatley, & Kutz, 1975; Lewis, Young, Brooks, & Michalson, 1975; Becker, 1977). Questions have begun to be asked about whether peers can benefit a child at home and, in addition, alleviate the harsh effects of strange environments on young children. Accordingly, the following section will review those studies attempting to answer these important questions.

In a cross-sectional study Eckerman, Whatley, and Kutz (1975) observed unfamiliar peers aged 10 - 24 months in a strange situation. Eckerman et. al. concluded that children as young as 10 - 12 months, were observed to have smiled and vocalized to each other, and offered and accepted toys with infrequent agonistic behavior. Further evidence for the importance of peer familiarity can be provided by an early study by Mengert (1931). Ten two-year-olds were observed in daily 20 minute dyadic play interactions. The children, familiar to each other, were observed to demonstrate over four times as many overt friendly responses to unfriendly responses. In addition, Mengert observed the children demonstrating an increased tendency to solve their own problems without requests for, or aid from, adults. In other words, even when adult help was possible the infants opted for their age-mates.

Becker (1977), in a design similar to the above two studies, contrasted nine-month-olds receiving peer stimulation with nine-month-olds receiving no peer contact. She found that the stimulated infants

significantly increased their peer-oriented behavior both in complexity and in degree of social engagement over the peer oriented behaviors of the non-stimulated infants. Mueller and Brenner (1977) also found support for the position of peer experience as a variable in quality of peer interaction. They report that 12 month olds, placed in play groups for 6 months, would, by 18 months, play more than a group of 19 month olds not having the same play group experience. The experienced toddlers also engaged in more coordinated social behaviors and more sustained social interaction than did less well-acquainted peers.

In a study indicating the influence of the infant peer, Rubenstein and Howes (1976) found tentative evidence to suggest that infants aged 17 months to 20 months prefer peers as playmates to parents. In fact, they discovered that familiar peers can even enhance the quality of play to a greater degree than could the mother.

In a study testing the influences of a mother, a strange peer, and a strange adult, Lewis, Young, Brooks, and Michalson (1975) observed 12 to 19 month olds and found that infants contacted their mothers significantly more than either a peer or an unfamiliar adult. The peers, in turn, were interacted with more often than were strange adults. In a second study, 12 month olds clearly favored familiar peers to strange peers. Unfortunately, in neither of these two studies were familiar peers ever contrasted to mothers. This study does suggest, however, that familiarity is the key variable for the positive interaction of an infant with another individual, peer or adult.

This particular group of studies clearly points to the importance of familiarity for the infant's interaction with others. The child's interaction with his mother has long been known to be of crucial importance.

What has been cropping up on the literature, of late, however, has been new suggestions about the role of the familiar peer. Not only is peer familiarity likely to reduce stranger anxiety reactions, found in various studies, but it also seems clear that peers can serve a very constructive function in the absence of the mother. Thus, the issue is not necessarily mothers versus non-mothers, but familiarity versus non-familiarity.

Even though we can draw some conclusions from several studies that have looked at infant-peer interaction (Eckerman et al., 1975; Mengert, 1931; Faigin, 1958; Schwartz, 1972; and Rubenstein & Howes, 1976), few of these studies have specifically examined the role of age mates under two years. Further, those studies which are relevant have typically had such a small "n" that the results are no more than suggestive. The present study was designed to investigate the infant-peer interaction of a sizeable number of age-mates under the age of two years. In addition, of the studies that examined the quality of play only one (Rubenstein & Howes, 1976), again with a very small "n," makes any effort to contrast maternal-infant play effectiveness and infant-peer play effectiveness. Therefore, a representative sample of infant peers were contrasted with mothers in an effort to discover if one of them is more facilitative for high level play.

Method

Subjects:

The subjects in this study were 26 toddlers (13 males and 13 females) 21 to 24 months of age. The circumstances of the study made it necessary to recruit a population of normal, home-reared infants; hence, infants were recruited who had no physical or mental handicap. Each toddler was

required to be raised at home by natural parents and to have a familiar peer, of approximately the same age, with whom he/she had played twice a week for a period of at least two months. Subjects were recruited from the birth announcement listings in the local daily newspaper.

Design:

The study was a repeated measures analysis of variance with two levels of the independent variable. The independent variables were the two repeated conditions: (a) the infant playing with his/her mother, and (b) the infant playing with the peer. The order of appearance was fixed so that the toddler's mother was always present to get the child into his/her play activity. Once the child was involved with the toy objects, the mother could leave the activity to enable the observers to code the child's play behavior when he/she was with a peer. This type of sequence seemed most appropriate as children at this young age still rely upon their mothers to help them ease into a new activity, and to mediate initial interaction with a peer.

Instruments:

Two different instruments were used during each of the two social situations. Observers coded infant interactions with play objects, both for the level of exploratory behavior reached and for the child's degree of involvement.

Developmental play scale. This play scale, created by Rubenstein and Howes (1976), measures five qualitatively different types of infant-play object interactions. By using this play scale, play behavior can be measured in a variety of social situations in order to understand how the quality of child play changes across social situations. The assumption of the scale is that the child becomes more able to engage in

increasingly sophisticated play as indicated by greater frequency of exploiting an object and creative uses of an object than, say, oral or passive play depending both upon whom he/she is playing with and his/her age.

1. Oral exploration of the play object.

2. Passive tactile contact with play objects; i.e., touching, carrying an object, sitting on an object. There is no attempt made to investigate the properties of the play object.

3. Active manipulation of an object--purposeful manipulation of an object to discover or observe its properties; i.e., climbing on objects, fingering them, rubbing, shaking, or moving parts of an object, etc. These behaviors, although purposeful, are not specific to any unique property of an object. The child's manipulative behavior is generalized to all objects; i.e., all objects are shaken or rubbed.

4. Exploiting the unique property of an object-activity suggested by the nature of the play object. In contrast to number three (above), these are behaviors specific to the unique properties of the object. For example, the child may push a toy car on the floor, take objects from a shelf, climb a ladder, turn pages of a book, etc.

5. Creative or unusual uses (high level exploration)--fantasy play, role playing, using the object in an unusual manner (the use goes beyond the restriction of the object), goal directed behavior to achieve some end result, etc.

Involvement with inanimate objects. The second instrument used was designed to investigate the child's actual involvement with the play object(s).

1. Wandering focus--no apparent focus, no exploration, or the child

is between activities. This is coded if no exploratory behavior transpires during the sampling unit.

2. Fleeting focus--little time is spent on an activity. This category is coded if exploratory behavior either begins or ends, or both begins and ends during the sampling unit.

3. Moderate-sustained focus--this category is coded if exploratory behavior is sustained throughout the entire sampling unit.

The total time unit for each experimental unit was 10 minutes, allowing 20 observations within each social condition. Each sampling unit was synchronized for both observers and lasted for 15 seconds as timed by pre-timed click sounds on a cassette recorder-player. This was followed by a 15 second recording period, again timed by click sounds on the cassette, during which both observers would place a check in the appropriate box if a certain level of play was reached, and for the child's involvement with the play object. During this recording period, the observer(s) would have the option of checking up to five boxes if the subject engaged in all the levels of play during the 15 seconds of observation time; however, when coding the involvement with the play object, only one box could be checked as each level was mutually exclusive. In addition, observations were coded for each child under each of the four experimental conditions (mother and child; infant alone; infant, mother and peer; and infant and peer alone).

Results

The results of the study indicate gender differences for male and female toddlers. Males indicates a greater frequency of play activity with

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Insert Table 1 about here

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peers, while females most frequently played with their mothers [$F(1,25)=8.875$, $p < .0065$].

In addition, males indicated a greater frequency of high level play (both exploitative and creative combined) with peers, while females, again, indicated a

Insert Table 2 about here

greater frequency of high level play with their mothers [$F(1,25)=5.77, p<.02$].

Discussion

The purpose of this study was to compare the effects of mothers and peers on toddler play. This comparison, it was hoped, would shed light on the issue of who is a better facilitator of both high level play and sustained play. The results of this study indicate that both mothers and peers are the best facilitators, depending upon the gender of the child.

The reasons for this discovery are not entirely clear, but several studies do attempt to help explain the finding. Moss (1967), Goldberg and Lewis (1969), and Cherry and Lewis (1976) report differential maternal behavior as a function of the sex of the child. Moss states that behavioral sex differences can already be observed in infants three weeks old, and definitely by three months. In addition, he also argues that maternal behavior is initially a response to a child, but as the child grows older, the mother exercises more and more influence over his/her sex-appropriate behavior. Thus, we have the origins of sex-stereotyped behaviors such as dependent and passive female play, and independent exploratory male play by three months. Goldberg and Lewis found that girls more often vocalized to mother; spent less time away and returned more often to mother; and touched their mother more often than did boys. They also argue that mothers of six month olds more often touched, talked to, and handled their daughters than their sons. Thus, it appears that infant-mother interaction does have some influence in shaping sex-appropriate behavior.

It can be argued that peer play is a time when children can get away from the pressures of their parents and try things out without a great deal of pressure to succeed. Cherry and Lewis report that mothers of two year old males more often used directives than did mothers of females. Mothers of females more often talk more, ask more questions, and repeat their daughters' utterances. Thus, the mother of the female becomes a companion to a greater degree than does the mother of the male. This may force males to seek out peer companionship to compensate for unsupportive mothers.

Thus, the study did suggest that peers are capable of contributing to toddler play (especially for males). Whether females ever choose the peer to the mother is still unknown. It appears, though, that if females ever had this inclination, they would probably find peers receptive.

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Table 1

Frequency of Play Activity for Child With Mother and Child With Peer Across Gender

	Social Situation	
Gender	Child With Mother	Child With Peer
Males		
Mean	111.38	128.23
SD	21.09	18.82
Females		
Mean	124.92	110.54
SD	31.65	35.4

Table 2

Frequency of High Level Play Activity For
Child With Mother and Child With Peer Across Gender

	Social Situations	
Gender	Child With Mother	Child With Peer
Males		
Mean	73.23	91.54
SD	20.59	33.64
Females		
Mean	89.00	76.08
SD	28.59	26.54